

**HIGH-SIDE ENERGY DELIVERY
THROUGH A SINGLE-QUADRANT THYRISTOR
TRIGGERED WITH A CURRENT-LIMITING SWITCH**

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Abstract of the Disclosure

10 A cardiac rhythm management system includes an implantable cardiac rhythm management device that includes a defibrillation energy delivery circuit. The defibrillation energy delivery circuit provides high side energy delivery through a single-quadrant thyristor switch that is triggered by a current-limiting transistor switch. The defibrillation energy delivery circuit requires fewer electronic components, reducing the size and/or cost of the implantable cardiac rhythm management device. For example, the single-quadrant thyristor, designed to conduct and latch in only one quadrant (e.g., quadrant III) and having appropriate dV/dt and voltage blocking capabilities, may eliminate the need for additional series-coupled semiconductor devices. In another example, current-limiting is designed into, or
15 inherent in, the semiconductor device triggering the single-quadrant thyristor, thereby eliminating the need for additional current-limiting circuits.

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